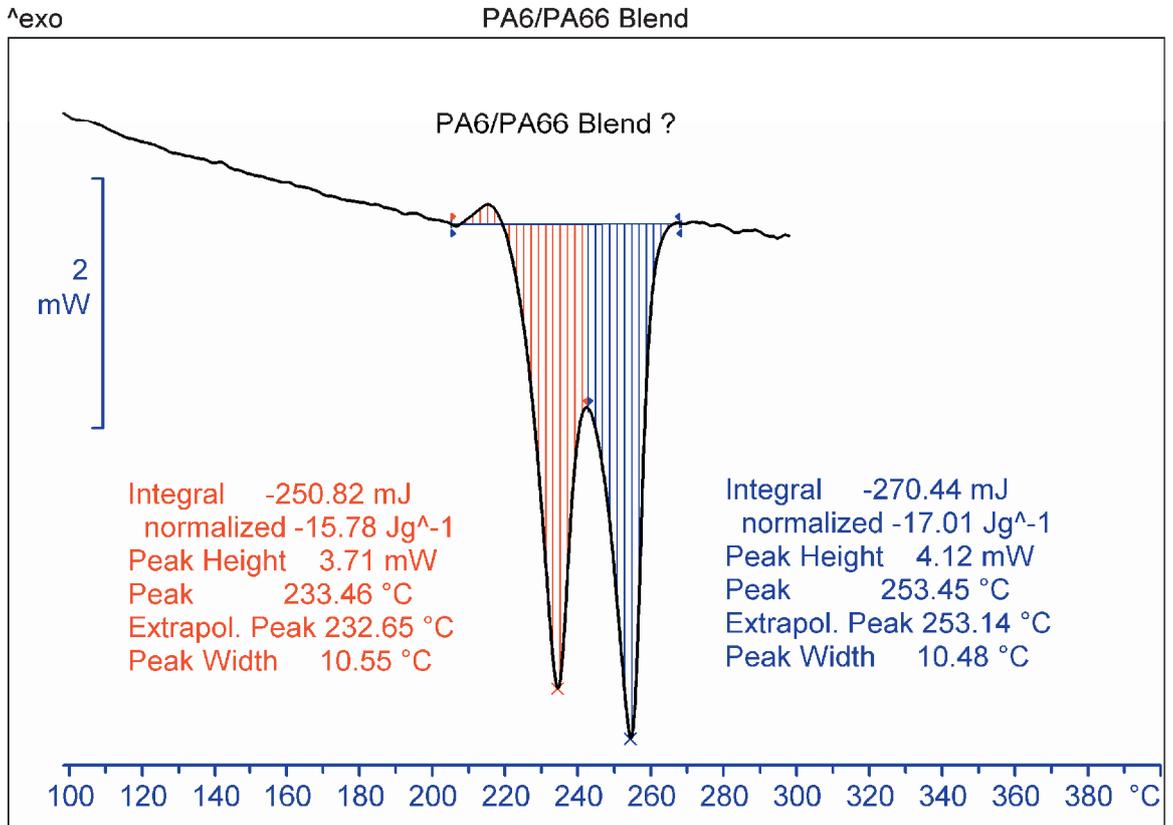


Thermal Analysis Application No. HB 232

Application published in METTLER TOLEDO TA Application Handbook Thermoplastics

# PA6/PA66 blend



## PA6/PA66 blend

**Sample** Protective caps said to be made of a PA6/PA66 blend

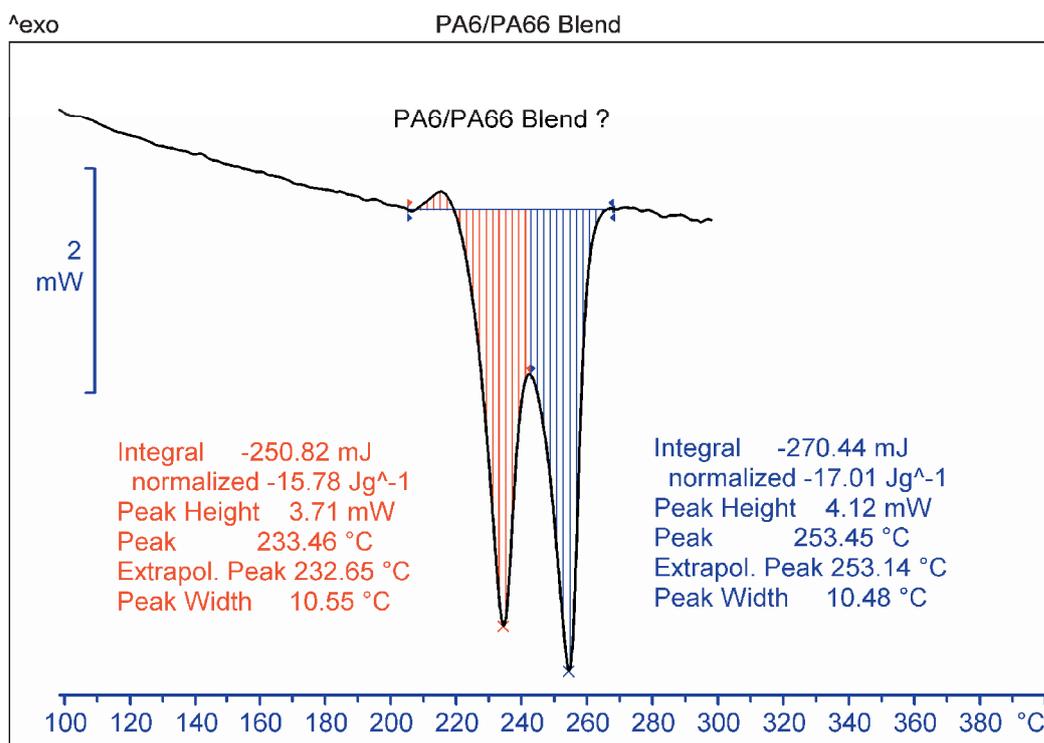
**Conditions** Measuring cell: DSC20

Pan: Aluminum standard 40  $\mu$ l, pierced lid

Sample preparation: Disk cut from cap (15.9 mg)

DSC measurement: Heating from 30 to 300  $^{\circ}$ C at 10 K/min

Atmosphere: Nitrogen, 50  $\text{cm}^3/\text{min}$



### Evaluation

	First peak	Second peak
Peak temperature in $^{\circ}$ C	233.5	253.4
Heat of fusion in J/g	15.8	17.0

The contents can be estimated from the peak areas if the respective heats of fusion are known (or can be estimated). If one assumes that the heat of fusion for both materials is 45 J/g (typical for polyamides), contents of 35% and 38% are calculated for the two polymers. More accurate results could be obtained through calibration with blends of known composition.

**Interpretation** The DSC curve shows two separate melting peaks that indicate the presence of PA6 and PA66. The baseline is drawn from before the small exothermic recrystallization peak in order to obtain the original heat of fusion (as supplied).

**Conclusions** The protective caps are in fact made of a PA6/PA66 blend. The peak areas allow a semiquantitative analysis of the two polymers to be made.

**Publishing Note:**

This application has been published in the METTLER TOLEDO Thermal Analysis Application Handbook Thermoplastics.  
See [www.mt.com/ta-handbooks](http://www.mt.com/ta-handbooks)

**Mettler-Toledo AG, Analytical**

CH-8603 Schwerzenbach, Switzerland

Phone +41-44-806 77 11

Fax +41-44-806 72 60

Internet [www.mt.com](http://www.mt.com)

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